CLAIMS

1. A live, attenuated virus of the order *Nidovirales*, said virus characterized as comprising a genome encoding a replicase polyprotein comprising at least one proteinase cleavage site that exhibits reduced or no cleavage.

2. The virus of claim 1, wherein the virus is of the family *Coronaviridae*.

3. The virus of claim 2, wherein the virus is a coronavirus or a torovirus.

4. The virus of claim 3, wherein the coronavirus is avian infectious bronchitis virus, bovine coronavirus, canine coronavirus, feline infectious peritonitis virus, human coronavirus 229E, human coronavirus OC43, murine hepatitis virus, porcine epidemic diarrhea virus, porcine hemagglutinating encephalomyelitis virus, porcine transmissible gastroenteritis virus, rat coronavirus, turkey coronavirus, severe acute respiratory syndrome virus, or rabbit coronavirus.

5. The virus of claim 3, wherein the torovirus is Berne virus or Breda virus.

6. The virus of claim 1, wherein the virus is of the family *Ateriviridae*.

7. The virus of claim 6, wherein the virus is an aterivirus.

8. The virus of claim 7, wherein the aterivirus is equine arteritis virus, Lelystad virus or simian hemorrhagic fever virus.

9. The virus of claim 1, wherein said replicase polyprotein comprises at least a second proteinase cleavage site that exhibits reduced as compared to wild-type, or no cleavage.

10. The virus of claim 4, wherein the cleavage site is a C1-C14 cleavage site.

11. The virus of claim 4, wherein the cleavage site is a murine hepatitis virus p28-p65 or p65-p210 cleavage site.

12. The virus of claim 1, wherein the cleavage site exhibits reduced cleavage as compared to wild-type.

13. The virus of claim 1, wherein the cleavage site exhibits no cleavage.

14. The virus of claim 1, wherein the cleavage site contains an amino acid deletion, an amino acid insertion or an amino acid substitution.

15. The virus of claim 1, wherein the cleavage site is wild-type, but cleavage is reduced or eliminated by an allosteric mutation.

16. A method of inducing an anti-viral immune response in a host comprising administering to said host a live, attentuated vaccine of the order *Nidovirales*, said vaccine characterized as comprising a genome encoding a replicase polyprotein comprising at least one proteinase cleavage site that exhibits reduced or no cleavage.

17. The method of claim 16, wherein the vaccine is of the family *Coronaviridae*.

18. The method of claim 17, wherein the vaccine is a coronavirus or a torovirus.

19. The method of claim 18, wherein the coronavirus is avian infectious bronchitis virus, bovine coronavirus, canine coronavirus, feline infectious peritonitis virus, human coronavirus 229E, human coronavirus OC43, murine hepatitis virus, porcine epidemic diarrhea virus, porcine hemagglutinating encephalomyelitis virus, porcine transmissible gastroenteritis virus, rat coronavirus, turkey coronavirus, severe acute respiratory syndrome virus, or rabbit coronavirus.

20. The method of claim 18, wherein the torovirus is Berne virus or Breda virus.

21. The method of claim 16, wherein the vaccine is of the family *Ateriviridae*.

22. The method of claim 21, wherein the vaccine is an aterivirus.

23. The method of claim 22, wherein the aterivirus is equine arteritis virus, Lelystad virus or simian hemorrhagic fever virus.

24. The method of claim 16, wherein said replicase polyprotein comprises at least a second proteinase cleavage site that exhibits reduced as compared to wild-type, or no cleavage.

25. The method of claim 19, wherein the cleavage site is a C1-C14 cleavage site.

26. The method of claim 19, wherein the cleavage site is a murine hepatitis virus p28-p65 or p65-p210 cleavage site.

27. The method of claim 16, wherein the cleavage site exhibits reduced cleavage as compared to wild-type.

28. The method of claim 16, wherein the cleavage site exhibits no cleavage.

29. The method of claim 16, wherein the cleavage site contains an amino acid deletion, an amino acid insertion or an amino acid substitution.

30. The method of claim 16, wherein the cleavage site is wild-type, but cleavage is reduced or eliminated by an allosteric mutation.

31. The method of claim 16, wherein said vaccine is administered intravenously or subcutaneously.

32. The method of claim 16, further comprising immunostimulant.

33. The method of claim 16, wherein said host is a dog, a cow, a pig, a cat, a mouse, a rat, a horse, a chicken, a turkey, a monkey or a human.

34. A nidovirus genome, said genome encoding a replicase polyprotein comprising at least one proteinase cleavage site that exhibits reduced or no cleavage.

35. A nidovirus replicase polyprotein comprising at least one proteinase cleavage site that exhibits reduced or no cleavage.

36. A vaccine comprising (a) a live, attentuated virus of the order *Nidovirales*, said virus characterized as comprising a genome encoding a replicase polyprotein comprising at least one proteinase cleavage site that exhibits reduced or no cleavage, and (b) a pharmaceutically acceptable diluent.

37. The vaccine of claim 35, wherein said vaccine is formulated as a unit dose of 10^6 to 10^{14} infectious particles.

38. The vaccine of claim 35, wherein said unit dose is provided in a 100 ml aliquot.

39. The vaccine of claim 35, further comprising a preservative.

40. The vaccine of claim 35, wherein said vaccine is lyophilized.